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May 16, 2003

Date of Deposit

Jonathan P. Taylor, Ph.D., Reg. No. 48,338

Name of Applicant, Assignee or
Registered Representative

Signature

5/16/03
Date of Signature

Our Case No.: 10322/33

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Patrick J. Hentges et al.

Serial No.: 10/044,831

Filing Date: January 9, 2002

For: ULTRATHIN DIELECTRIC OXIDE
FILMS

Examiner: TBA

Group Art Unit No.: 1751

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed below and on the attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed documents required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

The references now cited are the following:

FOREIGN PATENT

DOCUMENT NUMBER <small>Number-Kind Code (if known)</small>	DATE	COUNTRY
JP 09-2410008 A2	9/1997	Japan

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OTHER ART REFERENCES

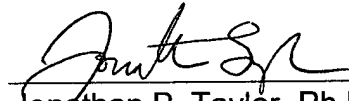
Bradley, D.C., et al., "Zirconium Alkoxides", <i>J. Chem.Soc.</i> , 1951, p. 280-285.
Bradley, D.C., et al., "Structural Chemistry of the Alkoxides. Part IV. Normal Alkoxides Silicon, Titanium, and Zirconium", <i>J. Chem.Soc.</i> , 1953, pp. 2025-2030.
Bradley, D.C., et al., "The Pyrolysis of Metal Alkoxides. Part 2 – Kinetic Studies On Zirconium Tetra-Tert.-Amyloxide", <i>Trans. Faraday Soc.</i> , 1959, Vol. 55, pp. 2117-2123.
Bradley, D.C et al., "Pyrolysis of Metal Alkoxides. I. Thermal Stability of Some Zirconium Alkoxides", <i>J. appl. Chem.</i> , 1959, Vol. 9, pp. 435-439.
Covington, M., et al., "Observation of Surface-Induced Broken Time-Reversal Symmetry in YBa2Cu3O7 Tunnel Junctions", <i>Physical Review Letters</i> , 1997, Vol. 79, No. 2, pp. 277-280.
Day, Victor W., et al., "Isolation and Structural Characterization of tra-n-propyl Zircor Hydrocarbon Solution and the Solid State", <i>Inorg. Chem.</i> , 2001, Vol. 40, No. 23, p. 5738-5746.
Hentges, P.J., et al., "Fabrication of Tunnel Barriers on YBCO Thin Films by Chemical Surface Modification", Abstract from March 2000 meeting of the American Physical Society, printed from the Internet at: < http://www.aps.org/meet/MAROO/baps/abs/S2110001.html >, dated March 2000, 1 page.
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Ichinose, Izumi, et al., "Stepwise Adsorption of Metal Alkoxides on Hydrolyzed Surfaces: A Surface Sol-Gel Process", <i>Chemistry Letters</i> , 1996, p. 831-832.
Ichinose, Izumi, et al., "A Surface Sol-Gel Process to TiO2 and Other Metal Oxide Films Molecular Precision", <i>Chem. Mater</i> , 1997, Vol. 9, No. 6, pp. 1296-1298.
Pafford, Mary Margaret, "Synthesis and Characterization of Alkyi Tetra-, Tri-, and Triskaidecazirconates", Doctoral Thesis submitted in the Graduate College of the University of Illinois at Urbana-Champaign, 2000, pp. i – xiii and 1-167.
Tada, Hiroaki, "Layer-by-Layer Construction of SiOx Film on Oxide Semiconductors", <i>Langmuir</i> , 1995, Vol. 11, No. 9, pp. 3281-3284.
Turevskaya, et al., "The alkoxides of zirconium and hafnium: direct electrochemical synthesis and mass-spectral study. Do "M(OR)4", where M=Zr, Hf, Sn, really exist?", <i>Russian Chemical Bulletin</i> , 1995, Vol. 44, No. 4, pp. 734-742.
Turova, N. Ya, et al., "Physicochemical approach to the studies of metal alkoxides", <i>Polyhedron</i> , 1998, Vol. 17, No. 5-6, pp. 899-915.
Zechmann, Cecilia A., et al., "Synthesis of Zirconium Pinacolate and Mechanism of Its Thermal Transformation to ZrO2: Impact of a Vicinal Diol Ligand", <i>Chem. Mater.</i> , 1998, Vol. 10, No. 9, pp. 2348-2357.

This Information Disclosure Statement is being filed prior to the receipt of the first Official Action reflecting an examination on the merits and hence is believed to be timely filed in accordance with 37 C.F.R. § 1.97(b). No fees are believed to be due in connection with filing of this Information Disclosure Statement. However, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is hereby authorized to deduct said fees from Brinks Hofer Gilson & Lione Deposit Account No. 23-1925.

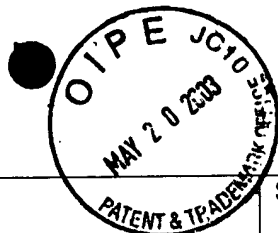
Applicants respectfully request that the listed documents be made of record in the present case.

Respectfully submitted,

5/16/03


Jonathan P. Taylor, Ph.D.
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Agent for Applicants

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FORM PTO-1449	SERIAL NO. 10/044,831	CASE NO. 10322/33
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	FILING DATE January 9, 2002	GROUP ART UNIT 1751
(use several sheets if necessary)		APPLICANT(S): Patrick J. Hentges et al.

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER <small>Number-Kind Code (if known)</small>	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
A					

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER <small>Number-Kind Code (if known)</small>	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES OR NO
A1	JP 09-2410008 A2	9/1997	Japan		Abstract

OTHER ART – NON PATENT LITERATURE DOCUMENTS

EXAMINER INITIAL	(Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.	
A2	Bradley, D.C., et al., "Zirconium Alkoxides", <i>J. Chem.Soc.</i> , 1951, p. 280-285.	
A3	Bradley, D.C., et al., "Structural Chemistry of the Alkoxides. Part IV. Normal Alkoxides Silicon, Titanium, and Zirconium", <i>J. Chem.Soc.</i> , 1953, pp. 2025-2030.	
A4	Bradley, D.C., et al., "The Pyrolysis of Metal Alkoxides. Part 2 – Kinetic Studies On Zirconium Tetra-Tert.-Amyloxide", <i>Trans. Faraday Soc.</i> , 1959, Vol. 55, pp. 2117-2123	
A5	Bradley, D.C et al., "Pyrolysis of Metal Alkoxides. I. Thermal Stability of Some Zirconium Alkoxides", <i>J. appl. Chem.</i> , 1959, Vol. 9, pp. 435-439.	
A6	Covington, M., et al., "Observation of Surface-Induced Broken Time-Reversal Symmetry in YBa ₂ Cu ₃ O ₇ Tunnel Junctions", <i>Physical Review Letters</i> , 1997, Vol. 79, No. 2, pp. 277-280.	
A7	Day, Victor W., et al., "Isolation and Structural Characterization of tra-n-propyl Zircor Hydrocarbon Solution and the Solid State", <i>Inorg. Chem.</i> , 2001, Vol. 40, No. 23, p. 5738-5746.	
A8	Hentges, P.J., et al., "Fabrication of Tunnel Barriers on YBCO Thin Films by Chemical Surface Modification", Abstract from March 2000 meeting of the American Physical Society, printed from the Internet at: < http://www.aps.org/meet/MAR00/baps/abs/S2110001.html >, dated March 2000, 1 page.	
A9	Hentges, P.J., et al., "Observation of Sharp, New Density of States Features in Solution-Fabricated YBCO Planar Tunnel Junctions", Abstract from March 2001 meeting of the American Physical Society, printed from the Internet at: < http://www.aps.org/meet/MAR01/baps/abs/S5270003.html >, dated March 2001, 1 page.	
A10	Ichinose, Izumi, et al., "Stepwise Adsorption of Metal Alkoxides on Hydrolyzed Surfaces: A Surface Sol-Gel Process", <i>Chemistry Letters</i> , 1996, p. 831-832.	
A11	Ichinose, Izumi, et al., "A Surface Sol-Gel Process to TiO ₂ and Other Metal Oxide Films Molecular Precision", <i>Chem. Mater</i> , 1997, Vol. 9, No. 6, pp. 1296-1298.	
A12	Pafford, Mary Margaret, "Synthesis and Characterization of Alky Tetra-, Tri-, and Triskaidecazirconates", Doctoral Thesis submitted in the Graduate College of the University of Illinois at Urbana-Champaign, 2000, pp. i – xiii and 1-167.	

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	A13	Tada, Hiroaki, "Layer-by-Layer Construction of SiO _x Film on Oxide Semiconductors", <i>Langmuir</i> , 1995, Vol. 11, No. 9, pp. 3281-3284.
	A14	Turevskaya, et al., "The alkoxides of zirconium and hafnium: direct electrochemical synthesis and mass-spectral study. Do "M(OR) ₄ ", where M=Zr, Hf, Sn, really exist?", <i>Russian Chemical Bulletin</i> , 1995, Vol. 44, No. 4, pp. 734-742.
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	A16	Zechmann, Cecilia A., et al., "Synthesis of Zirconium Pinacolate and Mechanism of Its Thermal Transformation to ZrO ₂ : Impact of a Vicinal Diol Ligand", <i>Chem. Mater.</i> , 1998, Vol. 10, No. 9, pp. 2348-2357.

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